

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

**TENTATIVE ADDENDUM NO. 1
TO
ORDER NO. 99-04**

**WASTE DISCHARGE REQUIREMENTS
FOR THE
ZOOLOGICAL SOCIETY OF SAN DIEGO
SAN DIEGO WILD ANIMAL PARK
SAN DIEGO COUNTY**

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On March 10, 1999, this Regional Board adopted Order No. 99-04, *Waste Discharge Requirements for the Zoological Society of San Diego, San Diego Wild Animal Park, San Diego County*. Order No. 99-04 established requirements for the discharge of up to 0.150 million gallons per day (MGD).
2. Discharge and Operation Specification B.2 of Order No. 99-04 sets forth conditions which must be met before the San Diego Wild Animal Park (WAP) can initiate a wastewater discharge greater than 0.044 MGD. These include 1) submission of a report from a registered engineer certifying the adequacy of the treatment and disposal facilities to comply with Order No. 99-04 for the full design flow of 0.150 MGD, 2) notification to the Regional Board that the new facilities have been completed as specified in the certification report, and 3) receipt of notice from the Regional Board that the discharge can be initiated. Furthermore, the State Department of Health Services (State DHS) has asked that the Regional Board not issue waste discharge requirements for the increased flow capacity prior to their approval of the project in accordance with California Code of Regulations, Title 22, Chapter 3.
3. The certification report referenced in Item 1) of Finding No. 2 above was submitted to the Regional Board on September 20, 2000. The cover letter to this report, dated September 19, 2000 indicated that the new treatment facilities would be completed by November 7, 2000. By letter dated January 30, 2002, the WAP reported that the new sewage treatment facility began operation in April 2001. These letters satisfy the notification requirement referenced in Item 2) of Finding No. 2. This addendum satisfies Item 3) by allowing the WAP to initiate the discharge in accordance with the terms and conditions of Order No. 99-04, as amended by this addendum.

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4. By letter dated December 4, 2000, the State DHS approved the Title 22 Engineering Report that allows the WAP to produce a secondary-23 recycled water to serve recycled water to restricted use sites at the WAP, subject to the conditions outlined in the December 4 letter. As part of the conditions, the WAP is required to demonstrate compliance with cross-connection requirements for recycled water distribution systems. In a letter dated November 22, 2002, State DHS informed the Regional Board that the WAP is working with the County of San Diego, Department of Health Services to complete the necessary cross-connection testing. The November 22 letter also indicated that the testing is near completion and that the State DHS had no objection to the Regional Board's approval of the increase in effluent flow at the WAP to 0.150 MGD.
5. The upgraded treatment plant consists of a headworks facility, a flow equalization basin, extended aeration and sedimentation basins, a chlorine contact tank, a sludge holding tank, and sludge drying beds.
6. The Regional Board has notified the WAP and all known interested parties of its intent to amend the waste discharge requirements of Order No. 99-04.
7. The Regional Board in a public meeting has heard and considered all comments pertaining to the terms and conditions of this addendum.

IT IS HEREBY ORDERED, That

1. The discharge of disinfected secondary-23 recycled water from the wastewater treatment plant for restricted use at the San Diego Wild Animal Park (WAP) exhibits up to a maximum peak daily flow rate of 0.150 million gallons per day (MGD) can be initiated.
2. Effluent limitations in Discharge and Operation Specifications B.4 shall be replaced as follows:
 - "4. The effluent from the wastewater treatment plant shall be discharged to the onsite storage pond and used for irrigation within the animal exhibit area. The concentrations of constituents in the effluent shall not exceed the following limits:

Constituent	Unit	Monthly Average ¹	Daily Maximum ²
Biochemical Oxygen Demand (BOD ₅ @ 20°C)	mg/L	30	45
Total Suspended Solids	mg/L	30	45
Total Dissolved Solids	mg/L	--	1,000
Chloride	mg/L	--	400
Total Coliform	MPN/100 ml	*	*
pH	Within the limits of 6.0 to 9.0 at all times		

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¹The monthly average limitation shall apply to the arithmetic mean of the results of all samples collected during any 30-day consecutive calendar month period.

²The daily maximum effluent limitation shall apply to the results of a single composite or grab sample.

*A total coliform bacteria MPN of 23/100 ml based on the median of the results for the last seven days. Effluent shall not exceed a total coliform bacteria MPN of 240/100 ml in more than one sample in any 30-day period."

3. Recycled Water Use Requirements E.5 shall be replaced as follows:

"5. Irrigation with, or impoundment of, non-disinfected secondary recycled water shall remain on site at the SDWAP. The plant shall be equipped with automatic shut down capability to prevent inadequately disinfected secondary effluent from discharging into the recycled water storage pond. The inadequately disinfected secondary effluent at the chlorine contact tank will be re-disinfected with a higher dose and re-sampled prior to diversion into the recycled water pond."

4. Recycled Water Use Requirements E.6 shall be replaced as follows:

"6. Spray irrigation with recycled water shall not take place within 100 feet of the fence line enclosing the animal exhibit, or public areas."

5. Recycled Water Use Requirements E.8 shall be replaced as follows:

"8. All recycled water piping and appurtenances in new installations and appurtenances in retrofit installations shall be colored purple or distinctively wrapped with purple tape in accordance with Chapter 5 Section 116815 of the California Health and Safety Code."

6. Recycled Water Use Requirements E.9 shall be replaced as follows:

"9. Reuse site shut down tests and inspections shall be monitored by the County of San Diego Department of Environmental Health (County DEH) or the State Department of Health Services (State DHS). The inspections and testing shall be performed by a cross connection control specialist certified by the California-Nevada section of the American Water Works Association or an organization with equivalent certification requirements. A written report documenting the result of the inspection or testing for the prior year shall be submitted to the County DEH or the State DHS within 30 days following completion of the inspection or testing."

7. Recycled Water Use Requirements E.10 shall be replaced as follows:

“10. Any backflow prevention device installed to protect the public water system shall be inspected and maintained in accordance with Section 7605 of Title 17, California Code of Regulations.”

8. The following shall be added to Recycled Water Use Requirements as E.11:

“11. The discharger shall notify the State DHS and the County DEH of any incidence of recycled water backflow into the potable water system as soon as possible, but in no case later than 24 hours of finding of the incident.”

9. Reporting Requirements G.5.c shall be replaced as follows:

“c. Any treatment plant upset which causes the effluent limitations of this Order to be exceeded including, but not limited to, the following:

- (1) Failure of chlorination equipment or loss of detectable chlorine residual.
- (2) Effluent total coliform bacteria MPN greater than 1600/100 ml in any one sample.
- (3) Effluent total coliform bacteria MPN greater than 240/100 ml in any two consecutive samples in any 30-day period.”

10. Section B, Sewage Treatment Plant Effluent, of Monitoring and Reporting Program No. 99-04 shall be replaced by the following:

“B. Sewage Treatment Plant Effluent

The following shall constitute the effluent monitoring program for the disposal of wastewater by the Zoological Society of San Diego's Wild Animal Park. Effluent samples shall be taken at the end of the sewage treatment process prior to discharge to the storage pond.

Parameter	Unit	Type of Sample	Sampling Frequency	Reporting Frequency
Flowrate	MGD	Continuous	Continuous	Monthly ¹
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	Grab	Quarterly ²	Quarterly
Total Suspended Solids	mg/L	Grab	Quarterly ²	Quarterly
Total Coliform	MPN/100 ml	Grab	*	Monthly ³
Chlorine Residual ⁴	mg/L	Continuous	Continuous	Monthly

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pH	--	Grab	Monthly ²	Monthly
Total Dissolved Solids	mg/L	Grab	Annual ²	Annual
Chloride	mg/L	Grab	Annual ²	Annual
Sulfate	mg/L	Grab	Annual ²	Annual
Nitrate (NO ₃)	mg/L	Grab	Annual ²	Annual
Iron	mg/L	Grab	Annual ²	Annual
Manganese	mg/L	Grab	Annual ²	Annual

1 Report the total daily flow, the total monthly flow, and the daily average flow for the reporting period.

2 The discharger shall increase the sampling frequency from monthly to weekly, from quarterly to monthly and from annually to quarterly for any noted constituent that exceeds the limit specified by Discharge Specification B.4 of Order No. 99-04. Weekly, monthly or quarterly monitoring shall continue until the discharger achieves compliance with the limitations for three consecutive periods. After compliance is achieved, the discharger shall resume sampling at the specified frequency. Weekly is defined as a calendar week (Sunday through Saturday). Monthly is defined as a calendar month. Quarterly is defined as three consecutive calendar months beginning at the first of the year. Annual is defined as a calendar year.

3 Results of daily total coliform bacteria monitoring, running 7-day median determinations, and maximum daily coliform readings for the current month and the previous 11 months shall be reported monthly.

4 Chlorine residual (mg/L) shall be recorded by a continuous recording meter and monitored continuously at a point following disinfection. Minimum daily chlorine residual shall be reported monthly.

* Samples for total coliform bacteria shall be collected at least daily from the disinfected effluent and at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures.

Notes: MGD = Million gallons per day
 MPN/100ml = Most Probable Number per 100 milliliters
 mg/L = milligrams per liter"

11. EFFECTIVE DATE

This Addendum becomes effective on the date of adoption by the Regional Board.

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, San Diego Region, on February 5, 2003.

TENTATIVE
JOHN H. ROBERTUS
Executive Officer